

11 April 1966

MEMORANDUM FOR: Chairman, U-2 Configuration Board

SUBJECT: Proposal for U-2 Ejection System

1. Subject proposal is for the extension of the capabilities of the existing U-2 Ejection Seat and Escape System to encompass the entire aircraft performance envelope from maximum performance to zero speed at zero altitude.

2. Proven hardware components are available from other programs to accomplish this without developing new conceptual hardware. Tests conducted in conjunction with these programs have shown that some stabilizing device is necessary to retard the rate of descent in order for a man to escape from high altitudes without developing dangerously high spin rates. With the encumbrances of heavy survival kit and inflated suit, the man has little or no control over his body attitude during free fall. Also, a high energy rocket catapult has demonstrated a sufficiently high ejection trajectory to combine with positive man seat separation and quick opening parachute for escape at zero speed and altitude.

3. The stabilized ejection seat development can be treated as consisting of three phases as follows:

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PHASE I (Development Tests) [REDACTED] Proposed Costs [REDACTED] 25X1A1a

- a. Gas Pressures and Mechanical Component Tests (10 Tests)
- b. High Altitude Drogue Chute Stability Tests (3 Tests)
- c. Zero Speed and Altitude Tests (4 Tests)

PHASE II (Qualification Tests)

- a. Drogue and Main Chute Qualification Tests
- b. Component Qualification Tests

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Attachment (3)

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PHASE III (Production)

- a. Preparation and Installation of Service Kits to Incorporate Development in Existing Aircraft.

4. Because of the integration of currently operational components to make up this ejection system, it will be possible in a short span of time to completely mockup this hardware. Qualification tests of components will be minimal by reason of their prior qualification in and for other escape systems.

5. Net increase in weight over the present escape system is 66 pounds.

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